OmniStream R-Type Single-Channel Networked AV Decoder

AT-OMNI-521

The Atlona **OmniStream™ R-Type (AT-OMNI-521)** is a networked AV decoder for an OmniStream-encoded video stream up to UHD @ 60 Hz and HDR, plus embedded audio and RS-232 or IR control pass-through. It is part of the **OmniStream R-Type Series**, designed for high performance, flexible distribution of AV over Gigabit Ethernet in residential and light commercial applications. The OmniStream 521 is HDCP 2.2 compliant and ideal for the latest as well as emerging UHD and HDR displays. It features visually lossless compression with pristine-quality video and graphics performance, plus extremely low, sub-frame latency from encode to decode – critical for demanding applications such as gaming. This decoder includes an HDMI output, high performance upscaling and downscaling, aspect ratio control, and video wall processing, plus presentation enhancement features such as logo insertion and scrolling on-screen text.

Package Contents

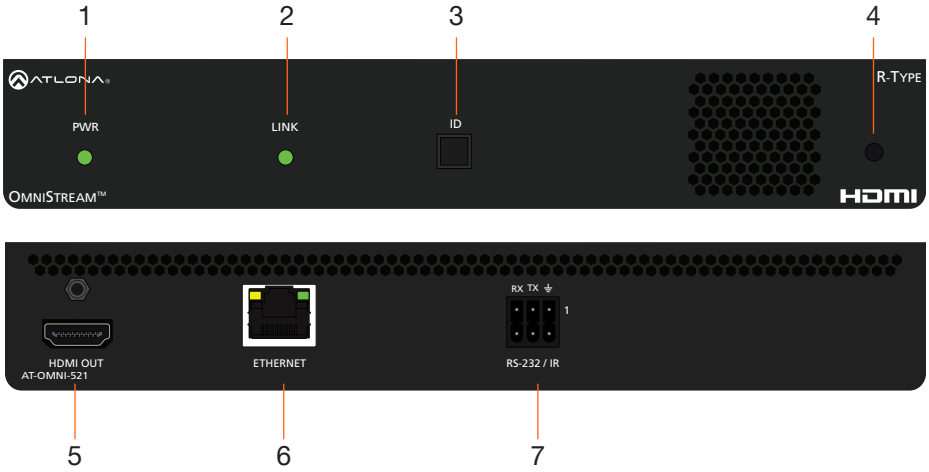
1 x AT-OMNI-521
1 x Push spring connector, 6-pin
1 x Wall/table mounting brackets
4 x Rubber feet
1 x Installation Guide

Operating Notes

- This product is powered using PoE (Power over Ethernet) and must be connected to a PoE-capable network switch. If the network switch is not PoE-capable, a PoE injector (purchased separately) must be used.
- Atlona recommends using the Velocity with Integrated AMS which provides discovery, management, and configuration assistance. Velocity with Integrated AMS is a free application that can be downloaded from the Atlona web site at http://atlona.com/product/at-ams-sw/.
- OmniStream uses mDNS as the discovery mechanism. In order for mDNS to function properly, there must not be restrictions applied to the network. VPN can be used to connect to a computer that is running AMS, on the same network. However, VPN cannot be used when AMS is running on the local machine.

IMPORTANT: Visit http://www.atlona.com/product/AT-OMNI-521 for the latest firmware updates and User Manual.

Panel Descriptions



1 PWR
This LED indicator is green when the unit is powered and booted.

2 LINK
This LED indicator is green when the link integrity between the decoder and the network switch is good.

3 ID
This button provides two functions:
(1) Press and release this button to send a broadcast network notification to any devices that may be listening (AMS).
(2) Press and hold this button for 30 seconds to perform a factory-reset of the unit. Refer to the OmniStream R-Type Decoder User Manual for more information.

4 REBOOT
Use a pointed object to press this recessed button and reboot the unit.

5 HDMI OUT
Connect an HDMI cable from this port to a UHD/HD display.

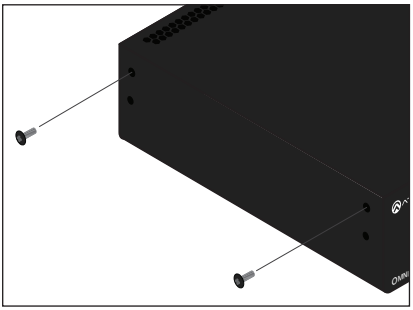
6 ETHERNET
Connect an Ethernet cable from this port to the Local Area Network (LAN).

7 RS-232 / IR
Use the included push-spring connector to connect a control system and/or an IR emitter or extender. Bidirectional IR pass-through is supported, allowing a device to be controlled from either the headend or the decoder endpoint Refer to **RS-232** and **IR** on page 5 for more information.

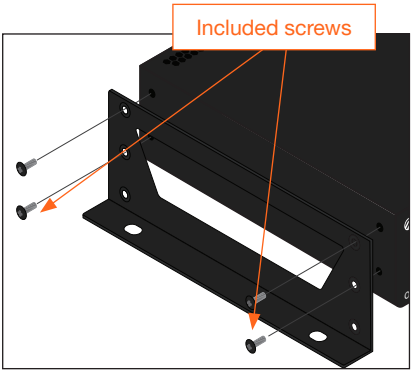
Mounting Instructions

The AT-OMNI-521 decoder includes two mounting brackets and four mounting screws, which can be used to attach the unit to any flat surface.

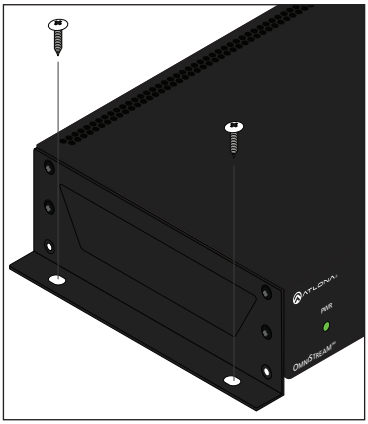
1. Using a small Phillips screwdriver, remove the two screws from the left side of the enclosure.



2. Position one of the mounting brackets, as shown below, aligning the holes on the side of the enclosure with one set of holes on the mounting bracket.
3. Use the enclosure screws to secure the mounting bracket to the enclosure.



4. To provide added stability to the mounting bracket, use two of the included screws and attach them to the two holes, directly below the enclosure screws, as shown above.
5. Repeat steps 1 through 4 to attach the second mounting bracket to the opposite side of the unit.
6. Mount the unit using the oval-shaped holes, on each mounting bracket. If using a drywall surface, a #6 drywall screw is recommended.



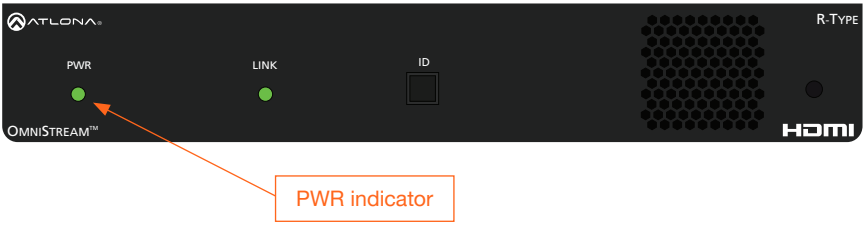
NOTE: Mounting brackets can also be inverted to mount the unit under a table or other flat surface.

Installation

1. Connect an Ethernet cable from the **ETHERNET** port on the decoder to a PoE-capable switch on the Local Area Network (LAN).

   IMPORTANT: If the network switch is not PoE capable, a PoE injector (purchased separately) must be used.

2. Connect an HDMI cable from the **HDMI OUT** port to a UHD/HD display.
3. If using RS-232 and/or IR, connect the included 6-pin push-spring connector to the **RS-232 / IR** port on the decoder.
4. The **PWR** indicator, on the front panel, display the power status of the decoder. When the decoder is powered, using either PoE or the optional 48V DC power supply (not included), the LED initially turns red. After a few moments it will turn amber, and finally green.

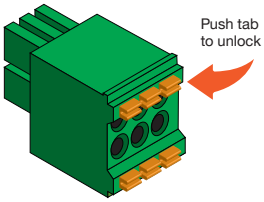


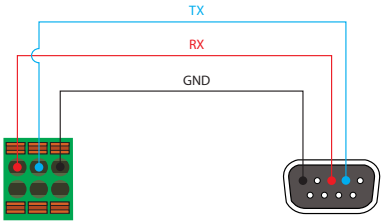
RS-232

The AT-OMNI-512 provides transport of RS-232 protocol over IP which allows communication between a control system and an RS-232 device. The top three terminals must be used. This step is optional.

1. Use wire strippers to remove a portion of the cable jacket.
2. Remove at least 3/16" (5 mm) from the insulation of the RX, TX, and GND wires.
3. Insert the TX, RX, and GND wires into correct terminal on the included push-spring connector, following the wiring diagram below. If using non-tinned stranded wire, press the orange tab, above the terminal, while inserting the exposed wire.

NOTE: Typical DB9 connectors use pin 2 for TX, pin 3 for RX, and pin 5 for ground. On some devices, the function of pins 2 and 3 are reversed.



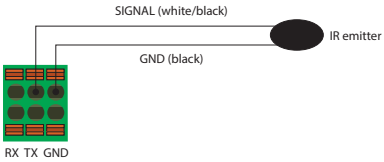


IR

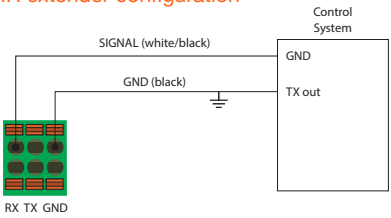
The same port that provides RS-232 connections also supports either an IR extender or IR emitter. The top three terminals must be used. This step is optional.

1. Use wire strippers to remove a portion of the cable jacket.
2. Remove at least 3/16" (5 mm) from the insulation from each of the two wires.
3. Insert the wires into the correct terminal on the included push-spring connector, following the desired wiring diagram below.

IR emitter configuration



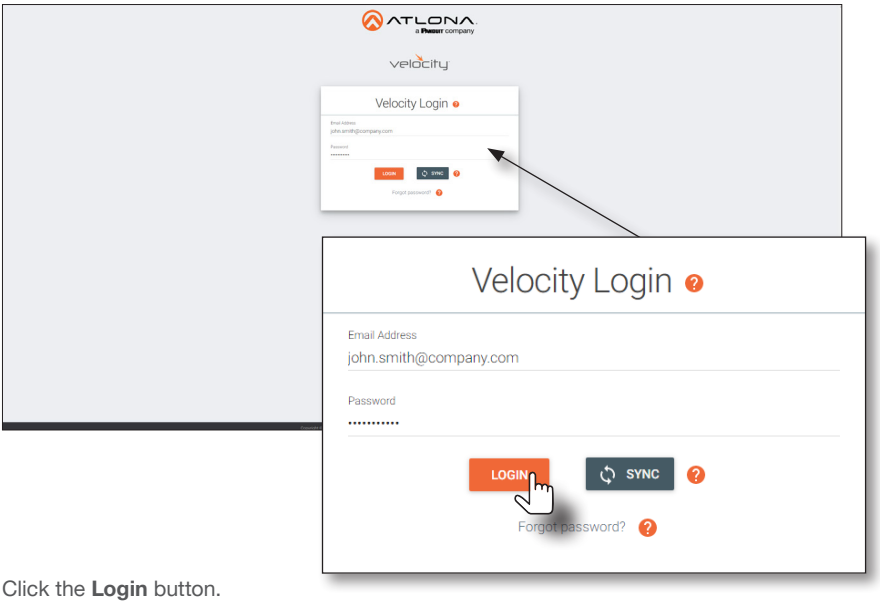
IR extender configuration



IMPORTANT: The IR emitter must be placed no more than one inch from the IR sensor on the device, in order to function properly.

Accessing devices using Velocity with Integrated AMS

1. Launch a web browser and enter the IP address of Velocity, in the address bar.
2. Enter the required login credentials.



3. Click the **Login** button.
4. The Velocity with Integrated AMS Dashboard will be displayed.
5. Click the ☰ icon, in the upper-left corner.
6. Click **Management** > **AMS Device Manager** from the fly-out menu.

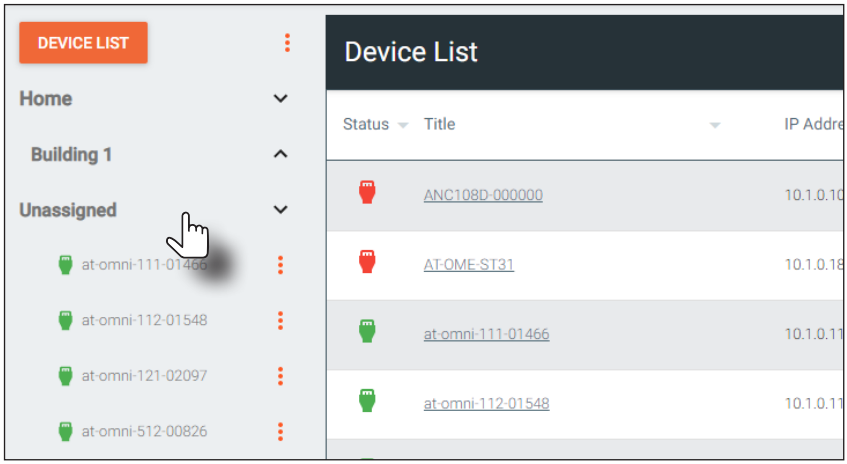
All available decoders will be displayed under the **Unassigned** category. When a decoder is unassigned, it means that it has not been assigned to a site, building, and/or room. Refer to the Velocity User Manual for more information on these topics.

If a DHCP server is not found within 60 seconds, the decoder will be placed in Auto IP mode and assigned an IP address within the range of 169.254.xxx.xxx. If this occurs, configure the network interface of the computer that is running AMS, located on the same subnet (169.254.xxx.xxx, subnet mask 255.255.0.0). Refer to User Manual for more information.

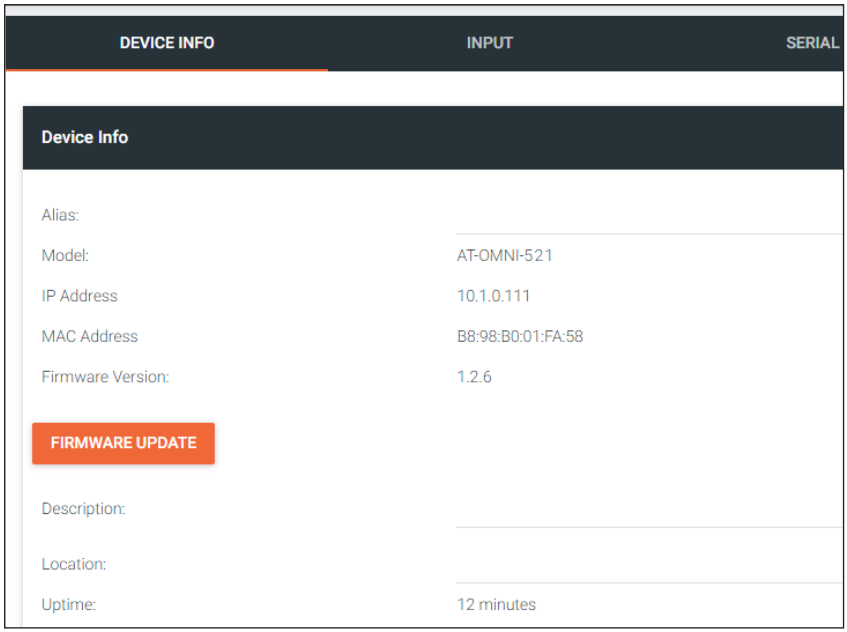
If no OmniStream decoders are found, then verify the following:

- The computer that is running Velocity must be on the same network as the OmniStream device.
- Remove any network restrictions that may be in place. In order for mDNS to function properly, there must not be restrictions applied to the network.

7. Click the desired decoder from the **Unassigned** device list or from under the **Device List** column.



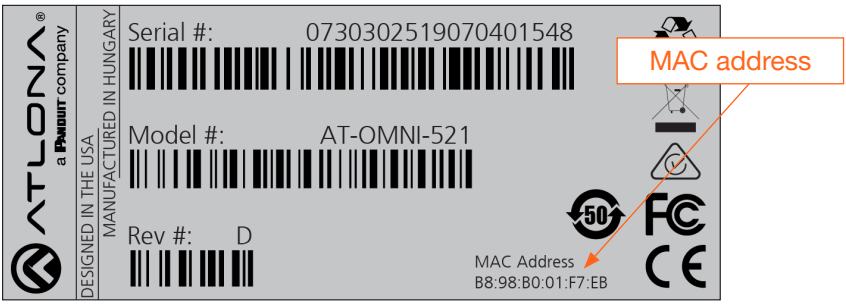
Once the unit is selected, the Velocity with Integrated AMS interface for the decoder will be displayed. Refer to the User Manual for more information on the interface.



Accessing devices using the built-in Web Server

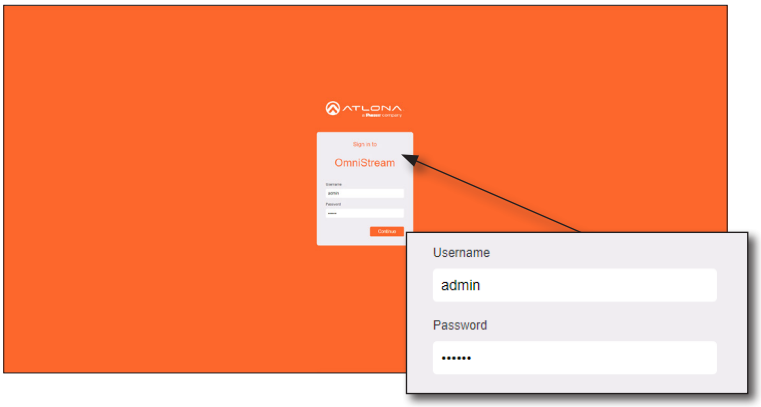
1. Identify the desired decoder by locating the MAC address on the bottom of the unit.

   In the following example (refer to your unit for the actual address), the label indicates that the MAC address for the physical interface is B8:98:B0:01:F7:EB.



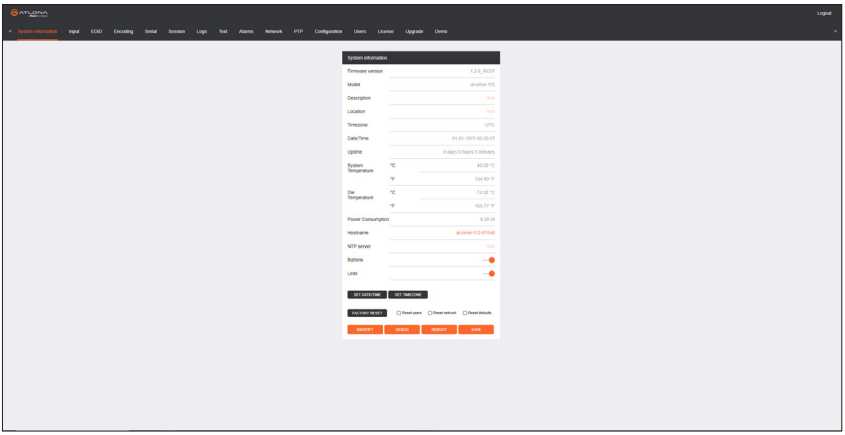
2. Connect a PC to the same network where the OmniStream encoders/decoders are connected.
3. Locate the IP address, matching it with the MAC address of the device, using an IP scanner or ARP.
4. Launch the desired web browser and enter the IP address of the decoder in the address bar.
5. Enter the username and password. Note that the password field will always be masked. The default credentials are:

   Username: `admin`
   Password: `Atlona`



NOTE: Atlona recommends changing both the username and password for security purposes. Refer to the OmniStream User Manual for more information.

6. The **System Information** screen will be displayed. Refer to the User Manual for more information on the web server interface.



7. The login process is complete.

Troubleshooting

Problem	Solution
PWR indicator is off.	• If using a PoE (Power-over-Ethernet) switch, make sure that the port on the switch that is connected to the decoder, has PoE enabled. When the decoder is powered using PoE, the **PWR** indicator will be green. • If using a PoE Injector, make sure that the injector has power applied to it and that the decoder is connected to the output of the injector. • Check the Ethernet cable for possible damage or loose connections.
LINK indicator is red.	• Connect an Ethernet cable to the **ETHERNET** port. • Check the Ethernet cable for possible damage or loose connections.
OmniStream decoders are not displayed in Velocity with AMS Integration.	• Verify that AMS and the decoder are on the same network. • If a DHCP server is not found within 60 seconds, the decoder will be placed in Auto IP mode and assigned an IP address within the range of 169.254.xxx.xxx. To access the decoder, configure a static IP on the PC within the same IP range, then connect the PC directly to the decoder and configure a static IP address for the decoder. This static IP address must be within the same IP range that is used by the Velocity with AMS Integration software. Otherwise, the decoder will not show up. • Check the Ethernet cable for possible damage or loose connections. • Make sure that mDNS is enabled on the network. Also, in order for mDNS to function properly, there must not be any restrictions applied to the network.

Notes

Version 4

English Declaration of Conformity

The English version can be found under the resources tab at:

https://atlona.com/product/at-omni-521/.

Chinese Declaration of Conformity 中国RoHS合格声明

由SKU列出於:

https://atlona.com/about-us/china-rohs/.

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